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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,918	06/26/2003	Fred S. Cook	2182(16166)	5738
33272	7590	03/25/2008	EXAMINER	
SPRINT COMMUNICATIONS COMPANY L.P. 6391 SPRINT PARKWAY MAILSTOP: KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			FORD, GRANT M	
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			03/25/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/606,918	COOK, FRED S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	GRANT FORD	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 December 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 12/20/2007 have been fully considered but they are not persuasive. Applicant argued in substance that –
  - (A) The prior art of Rawlins fails to disclose interconnection of a plurality of physical processing components to perform a respective processing operation.
  - (B) The prior art of Rawlins fails to disclose virtual processing elements allocable for respective data processing transactions that are interconnected by a network path to perform a respective processing operation.
  - (C) The prior art of Rawlins fails to disclose either composite resource sets comprised of combined processing operations or the pooling of such sets prior to a user request.
  - (D) The prior art of Rawlins fails to disclose a service function being assembled from processing operations that provide data processing transactions.

2. As to point (A), Applicant argued that the prior art of Rawlins fails to disclose interconnection of a plurality of physical processing components to perform a respective processing operation. Rawlins discloses at least physical edge routers and border routers at Col. 9 lines 33-49. Applicant then alleged that the prior art of Rawlins fails to disclose any virtual processing elements that are allocable according to a respective communication transfer rate based on a sustainable data flow rate to complete

respective data processing transactions. However, Rawlins discloses this limitation at Co. 8 line 58 through Col 9 line 7 (see shared virtual pool for each IntServ class at edge router) and Col. 10 lines 12-34 (see admission control block 182).

3. As to point (B), Applicant argued that the prior art of Rawlins fails to disclose virtual processing elements allocable for respective data processing transactions that are interconnected by a network path to perform a respective processing operation. Applicant argued that “*The different elements relied on in the Office Action merely pass traffic between a source and a destination.*” The Examiner disagrees. Rawlins discloses virtual pools of physical components which allow for guaranteed quality of service across a plurality of physical components. The prior art of Rawlins discloses the use of quality of service mechanisms such as Diffserv and Intserv, while providing for bandwidth reservation utilizing the RSVP protocol. The Examiner notes that the language of instant dependent claim 2 recites “*wherein said plurality of virtual processing elements includes multiple component types for performing respective processing operations.*” At the least, Rawlins discloses the use of separate GS and CL virtual processing elements/pools (Fig. 5-6). Further, the prior art of Rawlins discloses the use of at least edge routers, boundary routers, and network service provider routers each performing quality of service processing related to the allocation of data flows (Col 6 lines 56-64). Accordingly, Applicant’s argument is not persuasive.

4. As to point (C), Applicant argued that the prior art of Rawlins fails to disclose either composite resource sets comprised of combined processing operations or the pooling of such sets prior to a user request. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., pooling sets of resources prior to a user request) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Nevertheless, Rawlins discloses virtual pooling of resources using a combination of resources at Col. 9 lines 44-63 and additionally at Col. 10 lines 12-34 (see admission control block 182).

5. As to point (D), Applicant argued that the prior art of Rawlins fails to disclose a service function being assembled from processing operations that provide data processing transactions. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which

applicant relies (i.e., a service function being assembled from processing operations that provide data processing transactions.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-7,10-13, and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Rawlins et al. (7,069,337), hereinafter referred to as Rawlins.

a. As per claim 1, Rawlins discloses a method comprising the steps of:  
interconnecting a plurality of physical processing components within said network for providing a plurality of virtual processing elements that are accessible by respective network traffic paths to perform a respective processing operation (Col 6 lines 42-64);

representing a pool of said virtual processing elements using a resource aggregator, each virtual processing element having a capacity allocable according to a respective communication transfer rate based on a sustainable data flow rate to complete respective data processing transactions (Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34);

receiving a reservation request for utilizing specified processing resources (Col 8 line 58 through Col 9 line 7);

said resource aggregator exclusively reserving at least one virtual processing element for providing capacity to satisfy said reservation request in response to said respective communication transfer rate (Col 9 line 44 through Col 10 line 34); and

allocating use of a respective network traffic path to service said reservation request in response to said identified virtual processing element (Col 9 line 44 through Col 10 line 34).

b. As per claim 2, Rawlins discloses wherein said plurality of virtual processing elements includes multiple component types for performing respective processing operations (Col 6 lines 56-64, Col 9 lines 44-63, Col 12 lines 46-63).

c. As per claim 3, Rawlins discloses wherein said pool includes composite resource sets combining said respective processing operations to implement a predetermined composite service, each composite resource set being comprised of a plurality of said multiple component types (Figure 6, Col 11 lines 13-54).

d. As per claim 4, Rawlins discloses wherein said respective processing operations within a composite resource set are characterized by predetermined interactions for integrating said processing operations into a service function (Col 9 lines 44-63).

e. As per claim 5, Rawlins discloses wherein said processing operations include a data manipulation function and a storage function (Col 10 lines 12-34, Col 12 lines 46 through Col 13 line 16, Col 16 lines 1-32).

f. As per claim 6, Rawlins discloses wherein each of said composite resource sets further comprises at least one transport link within said network for connecting said multiple component types (Figure 3, Col 7 line 44 through Col 8 line 11).

g. As per claim 7, Rawlins discloses wherein said network is comprised of an IP network and wherein said step of allocating use of a respective network traffic path is comprised of sending an IP message in a bandwidth reservation request (Col 8 line 58 through Col 9 line 7).

h. As per claim 10, Rawlins discloses a method comprising:  
a plurality of physical processing components advertising to an aggregator their respective virtual processing components according to a plurality of component types for performing respective processing operations and advertising respective capacities of said virtual processing components, wherein said virtual processing components are addressable within said network as respective virtual network elements (Col 6 lines 42-64, Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34);

said aggregator constructing a plurality of service resource sets from said virtual processing components according to a service type, each service resource set comprised of a combination of said virtual network elements (Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34);

    said aggregator receiving a reservation request from a remote user for utilizing resources according to said service type (Col 8 line 58 through Col 9 line 7);

    said aggregator allocating a selected service resource set for fulfilling said reservation request (Col 9 line 44 through Col 10 line 34); and

    said aggregator identifying said selected service resource set to said remote user (Col 3 lines 7-32).

i.     As per claim 11, Rawlins discloses wherein said processing operations include a data manipulation function and a storage function (Col 10 lines 12-34, Col 12 lines 46 through Col 13 line 16, Col 16 lines 1-32).

j.     As per claim 12, Rawlins discloses wherein each of said composite resource sets further comprises at least one transport link within said network for connecting said multiple component types (Figure 3, Col 7 line 44 through Col 8 line 11).

k.     As per claim 13, Rawlins discloses wherein said network is comprised of an IP network and wherein said step of allocating use of a respective network traffic path is comprised of sending an IP message in a bandwidth reservation request (Col 8 line 58 through Col 9 line 7).

I. As per claim 16, Rawlins discloses an apparatus for providing a data processing service comprising:

a network including a plurality of transport links (Figure 3, Col 7 line 44 through Col 8 line 11);

a plurality of physical processing components connected within said network for advertising a plurality of virtual processing elements that are accessible by respective network traffic paths to perform respective processing operations, each virtual processing element having a capacity allocable according to a respective communication transfer rate based on a sustainable data flow to complete respective data processing transactions (Col 6 lines 42-64, Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34);

a resource aggregator connected within said network for representing a pool of said advertised virtual processing elements, receiving a reservation request for utilizing specified processing resources, exclusively reserving at least one virtual processing element for providing capacity to satisfy said reservation request in response to said respective communication transfer rate, and allocating use of a respective network traffic path to service said reservation request in response to said identified virtual processing element (Col 3 lines 7-32, Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34).

m. As per claim 17, Rawlins discloses an apparatus comprising:

a network including a plurality of transport links (Figure 3, Col 7 line 44 through Col 8 line 11);

a plurality of physical processing components connected within said network for advertising a plurality of virtual processing components according to a plurality of component types for performing respective processing operations and advertising respective capacities of said virtual processing components, wherein said virtual processing components are addressable within said network as respective virtual network elements (Col 6 lines 42-64, Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34); and

and aggregator for constructing a plurality of service resource sets from said virtual processing components according to a service type, each service resource set comprised of a combination of said virtual network elements (Col 8 line 58 through Col 9 line 7, Col 10 lines 12-34), receiving a reservation request from a remote user for utilizing resources according to said service type (Col 8 line 58 through Col 9 line 7), allocating a selected service resource set for fulfilling said reservation request (Col 9 line 44 through Col 10 line 34), and identifying said selected service resource set to said remote user (Col 3 lines 7-32).

n. As per claim 18, Rawlins discloses wherein said processing operations include a data manipulation function and a storage function (Col 10 lines 12-34, Col 12 lines 46 through Col 13 line 16, Col 16 lines 1-32).

o. As per claim 19, Rawlins discloses wherein each of said composite resource sets further comprises at least one transport link within said network for connecting said multiple component types (Figure 3, Col 7 line 44 through Col 8 line 11).

p. As per claim 20, Rawlins discloses wherein said network is comprised of an IP network and wherein said step of allocating use of a respective network traffic path is comprised of sending an IP message in a bandwidth reservation request (Col 8 line 58 through Col 9 line 7).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8-9,14-15, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rawlins in view of Wright (7,082,102).

a. As per claims 8,14, and 21, Rawlins discloses the use of an IP network (Fig. 4, Col 7 lines 1-11), however Rawlins fails to explicitly disclose the use of label-switched paths.

Wright discloses wherein network traffic paths are comprised of label-switched paths (Col 2 lines 12-19, Col 3 line 34 through Col 4 line 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of label-switch paths with policy-based service class routing

systems. One of ordinary skill in the art would have been motivated to do so for the purpose of providing communications across a MPLS environment (Col 2 lines 12-19).

b. As per claims 9,15, and 22, Rawlins discloses the invention substantially as claimed above. However, Rawlins fails to explicitly teach the use of an ATM network wherein said network traffic paths are comprised of ATM virtual paths.

Wright discloses the use of an ATM network wherein network traffic paths are comprised of label switched paths (Col 3 lines 34-44 and 61-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of an ATM network and virtual paths with policy-based service class routing systems. One of ordinary skill in the art would have done so for the purpose of providing legacy network support which is capable of performing label lookup and replacement (Col 3 lines 34-44 and 61-63).

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GRANT FORD whose telephone number is (571)272-8630. The examiner can normally be reached on 8-5:30 Mon-Thurs alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gmf  
/Grant Ford/  
Examiner, Art Unit 2141

/Andrew Caldwell/  
Supervisory Patent Examiner, Art Unit 2142